



**TENNESSEE STATE FIRE MARSHAL'S OFFICE  
COMMISSIONER'S ANNUAL FIRE PREVENTION REPORT FOR 2019**

*Submitted in accordance with T.C.A. § 68-102-133*

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Tennessee Department of Commerce and Insurance (TDCI)

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The commissioner shall, annually, on or before February 15, transmit to the governor a full report of the commissioner's proceedings under this chapter, and such statistics as the commissioner may wish to include in the report, for the year previous.

The commissioner shall also recommend any amendments to the law that, in the commissioner's judgment, are deemed advisable. The report of the commissioner shall include a full and complete report of all collections made and all expenditures and for what purposes they were made and to whom paid.

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## **Overview of State Fire Marshal's Office Operations**

The mission of the Division of Fire Prevention, also known as the Tennessee State Fire Marshal's Office (SFMO), is to reduce the loss of life and property from fire and explosions. The SFMO and its seven Sections are committed to protecting the safety of Tennesseans and their property through: fire prevention, education, codes enforcement, inspection, and regulation. Each Section of the SFMO incorporates one or more of these core functions which aligns our focus and provides vision for the future.

The Education & Outreach Section assists the fire service, elected officials and the communities they serve to realize the potential economic incentives of prevention by measuring trends, setting benchmarks, analyzing data and compiling comprehensive loss reports. The Education & Outreach Section serves as a resource for fire prevention efforts and also oversees the registration and fire loss data reporting for fire departments across the state. The Sections of Codes Enforcement, Electrical, Residential and Marina Inspections, and Manufactured Housing & Modular Building work to ensure engineered environments are designed and constructed to applicable standards and codes which reduces the susceptibility of buildings to fire and lowers the likelihood of a related fatality. The Tennessee Fire Service and Codes Enforcement Academy (TFACA) and the Commission on Firefighting Personnel Standards and Education (Commission) are tasked with the training and certification of firefighters in Tennessee. Both TFACA and the Commission serve to promote professionalism and competency throughout the fire service. Lastly, the Administrative Services Section provides support for the SFMO overseeing the processing of over 20 types of permits, licenses and certificates.

In working towards our mission, the SFMO interacts with the general public, state and local elected officials, the fire service, and many regulated industries on a daily basis. The SFMO also collaborates with the Tennessee Mutual Aid System and the Tennessee Emergency Management Agency (TEMA) to ensure resources are coordinated for fire service operations during widespread disasters.

### **Fire Prevention Division Sections**

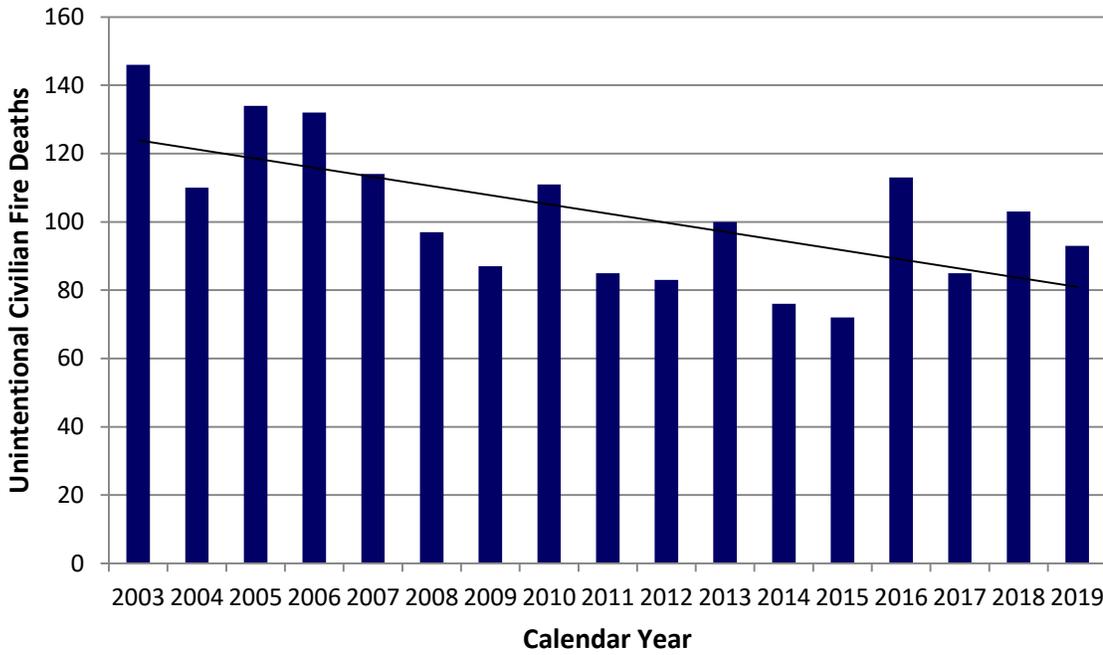
- Education & Outreach
- Codes Enforcement
- Electrical, Residential and Marina Inspections
- Manufactured Housing & Modular Building
- TFACA
- Commission on Firefighting Personnel Standards and Education
- Administrative Services

## State of the State

Tennessee has historically ranked among the highest states in the country in its rate of unintentional civilian fire deaths. The SFMO is committed to reducing the loss of life and property due to fires by focusing on education, codes enforcement, inspection, regulation, and investigation. Like most of the United States, Tennessee has experienced a reduction in fire deaths over the past several decades due, in part, to these programs. In 2017, the National Fire Protection Association (NFPA) released its report 'U.S. Fire Death Rates by State' which showed that Tennessee had dropped from the 8<sup>th</sup> highest rate of fire deaths to the 11<sup>th</sup> highest rate.

The preliminary 2019 fire data show a 10% decrease in unintentional civilian fire deaths from last year. According to SFMO records, there were 93 such fire deaths in Tennessee during 2019, which is down from the 103 fire deaths the previous year. The overall trend of fire deaths since 2003 has been downward. The rate of unintentional civilian fire deaths in 2019 was 13.7 deaths per million.

# TENNESSEE CIVILIAN FIRE DEATHS



Year	Deaths
2003	146
2004	110
2005	134
2006	132
2007	114
2008	97
2009	87
2010	111
2011	85
2012	83
2013	100
2014	76
2015	72
2016	113
2017	85
2018	103
2019	93
<b>Total</b>	<b>1,741</b>

The majority of unintentional civilian fire deaths occur in residential structures. Eighty-nine (95.7%) of the ninety-three deaths last year were from household fires. More than three out of four fire deaths in 2019 occurred in single-family homes. This is consistent with other years. From 2015-2019, 80.3% of fire deaths occurred in single-family homes.

Structure Type	Deaths	%
Single Family	71	76.3%
Apartment/Condominium	12	12.9%
Duplex	4	4.3%
Other	4	4.3%
Triplex/Quadplex	1	1.1%
Townhouse	1	1.1%
<b>Total</b>	<b>93</b>	<b>100.0%</b>

In 2019, there was a reduction in the total number of reported fires and structure fires as 8,066 structure fires were reported by fire departments to the SFMO. This is 452 fewer structure fires than the 8,518 structure fires reported in 2018. The 2019 numbers are expected to go up marginally as fire departments continue to submit reports from 2019 incidents during the first part of 2020.

The adjacent table represents all incidents and dollar loss, as reported to the Tennessee Fire Incident Reporting System (TFIRS), for the 2019 calendar year, but is considered preliminary until April 2020 to ensure that all fires reported are complete and accurate. TFIRS also requires reporting fire departments to identify the cause of the fire from 16 standard cause categories according to the reported heat source, equipment involved in ignition and factors contributing to ignition. One category is “unknown” which reports the cause as undetermined.

The 23,263 total reported fires caused an estimated \$288,452,041 in property loss for Tennesseans. These loss estimates are

Reported Incident Type	Reported Incidents	% of Total
Fire: Structure	8,066	1.4%
Fire: Vehicle	4,825	0.9%
Fire: Other	10,372	1.8%
<b>Fire Subtotal</b>	<b>23,263</b>	<b>4.1%</b>
Rescue: Medical Treatment	354,679	62.4%
Rescue: Others	3,944	0.7%
<b>Rescue Subtotal</b>	<b>358,623</b>	<b>63.0%</b>
False Call: Malicious	3,484	0.6%
False Call: Other	48,964	8.6%
<b>False Call Subtotal</b>	<b>52,448</b>	<b>9.2%</b>
Hazardous Condition	16,084	2.8%
Explosions	995	0.2%
Service Calls	40,899	7.2%
Good Intent Calls	73,573	12.9%
Severe Weather or Natural Disaster	1,065	0.2%
Special Incident	1,789	0.3%
<b>2019 Total Reported Calls</b>	<b>568,793</b>	<b>100.0%</b>
<b>Total Structure Fire Dollar Loss</b>	<b>\$240,423,852</b>	
<b>Total Fire Dollar Loss</b>	<b>\$288,452,041</b>	

from incident reports submitted by fire departments. As with the structure fires, the SFMO expects this number to increase slightly as fire departments are still submitting and updating incident reports from 2018. The preliminary \$288 million in fire loss is down about 8% from the \$313 million reported in 2018.

## Education & Outreach Section

The Education & Outreach Section provides fire safety educational materials and resources to the citizens and fire departments of Tennessee. The Section’s programs include fire incident reporting, fire data analysis, fire department recognition, public education, community risk reduction, and the “Get Alarmed Tennessee!” program that provides free smoke alarms to fire departments and volunteer organizations to install inside Tennessee homes. Education & Outreach works with its partners at both the national and local levels to share the latest information in fire prevention. By using strategies developed to address specific risks identified through data analysis, the Section seeks to reduce fire loss in Tennessee though direct communication with the public and by empowering fire departments to educate the communities they protect.



Since “Get Alarmed Tennessee!” started in 2012, at least 281 residents have been alerted to fires in their homes and escaped without serious injury thanks to smoke alarms installed through the program. In 2019, the SFMO was awarded \$333,334 in funding from the Federal Emergency Management Agency’s Fire Prevention and Safety grants to continue the program.

### Get Alarmed Tennessee in 2019:

- 19,212 smoke alarms installed
- 6,486 households received in-home fire safety education and free smoke alarms
- 17 door-to-door smoke alarm installation canvasses
- At least 22 residents escaped home fires due to these smoke alarms
- 16,221 smoke alarms installed in distressed counties
- 27 Saves from Get Alarmed Tennessee in distressed counties
- 63 Get Alarmed Tennessee partners in distressed counties



In 2019, the SFMO delivered custom community risk assessments to 103 fire departments as part of its statewide community risk reduction plan. The community risk assessments for fire departments include the most common causes of fires in their communities along with maps showing areas with a high risk for residential structure fires. Providing risk assessments allows fire departments to focus on prevention and mitigation strategies to help their communities. So far, 28 fire departments have submitted community risk reduction plans to the SFMO based on these risk assessments.

In 2018, the SFMO and Knox Company kicked off a statewide “Close the Door” campaign aimed at bringing this potentially life-saving message to residents across Tennessee. Partners enrolled in the program receive a pop-up banner, educational handouts, and a curriculum designed to aid firefighters in delivering appropriate messaging. In 2019, 56 fire departments received program materials to help spread the “Close the Door” message in their local communities. Statewide, the SFMO has documented over 79,000 people that have received in-person fire safety education through the program. Since 2018, over 80 fire departments and civic organizations have received “Close the Door” materials through the program.

### Fire Department and Firefighter Statistics

The SFMO recognizes 698 fire departments. Of these fire departments, 686 protect public property, whereas 12 solely protect private property, such as an industrial or commercial facility, military facilities, or airports. 680 of these 698 fire departments have reported detailed staffing information to the SFMO.

Of those 680 fire departments that provided staffing information, only 44 (6.5%) are career fire departments where all firefighters receive financial compensation for their services. 519 (76.3%) of the fire departments in Tennessee are staffed entirely by volunteers. The remaining 117 (17.2%) fire departments are staffed by a combination of volunteer and career firefighters.

The majority of the firefighters in Tennessee are volunteers who receive either no compensation or a nominal fee for their services. The 22,065 active firefighters that have been reported to the SFMO consist of 14,218 (64.4%) volunteers and 7,847 (35.6%) career firefighters. 2,229 of the 14,218 volunteer firefighters receive a small payment or stipend for responding to calls.

## Codes Enforcement Section

The Codes Enforcement Section enforces statewide adopted fire and building construction safety codes and standards to afford a reasonable degree of safety to life and property from fire and hazardous incidents. This Section oversees the design, construction, alteration, and repair of buildings or structures across the state including state buildings, commercial residential structures, high hazard occupancies, jails and prisons, covered malls, assembly spaces with 300 or greater occupants, schools, and daycares. The Section also conducts annual inspections for schools, daycares and other buildings requiring an inspection from the SFMO to receive an initial license from the Administrative Services Section and other state agencies.

Complaints relating to buildings under its jurisdiction are investigated by the Codes Enforcement Section. The Section also investigates complaints regarding licensees or entities licensed by the Administrative Services Section such as blasters and blasting activity. Additionally, Codes Enforcement conducts safety inspections at annual and seasonal fireworks locations as well as the review of all public fireworks displays to ensure a reasonable degree of safety.

### Plans Review and Inspections in 2019

- Plan submittals received: 1,270
- Inspections performed: 17,429
- Schools inspected: 1,540
- Schools inspected in distressed counties: 119
- Blasting inspections performed: 553
- Blasting complaints received: 303
- Annual fireworks retailers inspections: 10
- Seasonal fireworks retailers inspections: 748
- Public fireworks displays reviewed: 484



## Electrical, Residential and Marina Inspections Section

The Electrical, Residential and Marina Inspections Section is responsible for critical safety inspections in Tennessee. This Section issues permits and performs inspections to enforce the provisions of Tennessee's adopted electrical code, residential building code and energy conservation code. In 2019, all permits and inspection numbers increased compared to the previous year which reflects the growth in construction statewide.

### Permits and Inspections in 2019

- Total residential building permits issued: 1,155
- Residential building permits issued in distressed counties: 100
- Total residential building inspections performed: 2,823
- Total electrical permits issued: 144,184
- Electrical permits issued in distressed counties: 8,654
- Total electrical inspections performed: 231,487
- Total marinas inspected: 43

Following the passage of the Noah Dean and Nate Act, Tenn. Code Ann. § 68-102-601 *et seq.*, this Section added marina safety inspections to its operations. The law requires each public marina to be inspected once every five years. Since its implementation in 2015, a safety inspection has been performed at 204 public marinas in which numerous safety violations have been found. One such inspection included the discovery of a 480 volt electrical service which was energizing water at the marina. Other found safety violations include: energized electrical cords in water, no installed main disconnects at which power can be disconnected in the event of a situation, energized junction boxes in water, electrical wiring under docks not properly installed, no Ground Fault Indicators installed on some marinas and faulty electrical wiring in which the neutrals and grounds were not separated on subpanels installed on a marina. These violations, if not detected, could have caused serious injuries, even death, to people entering the water in the vicinity of these hazards.

In 2019, the Section focused on the January 2020 roll out of the Online Permitting System which modernizes the electrical and residential permit purchasing and inspection process. By allowing statewide purchasing and online inspection requests, customers will now be able to purchase and request inspections by simply going online. It important to note that the Online Permitting System does not impact electrical and/or residential permitting processes in exempt jurisdictions where adoption and enforcement of codes are independent from the state. The Online Permitting System updates the Section's process from paper to electronic which in turn provides customer focused options to allow for requests to be made 24/7 while still maintaining physical selling locations. Mobile inspections and online permitting will drastically reduce the amount of time of permit issuance and receipt making it virtually instantaneous and will benefit Tennesseans by increasing efficiency and decreasing wait times.

## Manufactured Housing & Modular Building Section

The Manufactured Housing & Modular Building Section administers portions of the Uniform Standards Code for Manufactured Homes Act related to U.S. Department of Housing and Urban Development (HUD) Labeled Manufactured Homes and the Tennessee Manufactured Home Installation Act. This Section acts as HUD's State Administrative Agent (SAA) and exclusive In Plant Inspection Agency (IPIA) to administer certain aspects of the National Manufactured Housing



Construction and Safety Standards Act of 1974. The Section also administers the Consumer Complaint Process, as well as the Dispute Resolution Process. These two processes provide direct assistance to any consumer that feels they have been provided a defective product or if they have a safety concern.

This Section completes all licensing functions for the Manufactured Housing and Modular Buildings Industry and is responsible for inspection of the installation of new and used manufactured homes. The Section is required statutorily to ensure that at least 5% of the manufactured homes installed in the state are inspected each year and in 2019, the Section performed 2,033 inspections of new and used manufactured homes which is approximately 48% of the new and used manufactured homes installed in Tennessee.

Manufactured Housing continues to be an affordable means of housing nationwide, especially in Tennessee. The Section's Installation Program places an emphasis on the 15 distressed

counties. It is the Section's goal to inspect, at a minimum, the average inspection rate of 48% inside these counties. By accomplishing this inspection goal, the Section ensures adequate coverage in these counties and which hopefully deters the possibility unsafe installations and consumer scams. There were 430 installations submitted in these counties with 204 being inspected.

## Inspections and Activities in 2019

- Floors inspected in plant: 29,013
- HUD labels sold: 25,400
- Consumer complaints resolved: 13
- Installations: 4,153
- Installations in distressed counties: 430
- Installations inspected: 2,034
- Installations inspected in distressed counties: 204

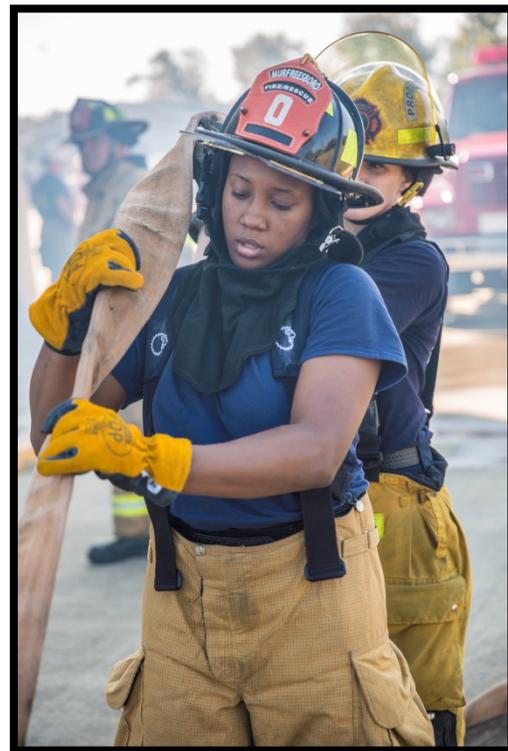
## Tennessee Fire Service and Codes Enforcement Academy

The Tennessee Fire Service and Codes Enforcement Academy (TFACA) plans, develops, and facilitates education and training programs to promote the professionalism and competency of fire service and codes enforcement personnel through a standardized statewide program. These programs enhance the individual and collective ability of those in the fire service to protect the life and property of Tennesseans. TFACA's focus on both fire service and codes enforcement establishes it as regional center for the training, testing, and certification of codes enforcement officials, firefighters and other homeland security first responders.

### Training and Activities in 2019

- Total students enrolled: 15,597
- Total classes conducted: 1,073

In October 2019, TFACA celebrated the ceremonial groundbreaking of its \$5.7 million conference center. When complete, the 19,000 square foot conference center will provide additional meeting space to hold large classes, specialty classes in incident management, conferences and graduations. As of December 2019, the conference center's footings and concrete pads have been completed; steel framework for the structure is at various stages with masonry brick work started on the auditorium.



Additionally, in 2019, several campus improvements have been initiated including the opening of bid for repairs to burn buildings. Meetings have also been conducted to schedule the replacement of all HVAC units on campus by mid-2020. Lastly, TFACA received a delivery of a 2019 Custom Fire Pumper which replaced a 2001 pumper placed in operation when TFACA opened its doors on this campus. All of the improvements to campus in 2019 focused on improving the quality of training available for firefighters and code officials at TFACA.

## Commission on Firefighting Personnel Standards and Education

The Commission on Firefighting Personnel Standards and Education (Commission) is responsible for the certification of volunteer and paid firefighters in the State of Tennessee. The certification program is designed to be an incentive to firefighters to develop their skills and further their training and education. The Commission also manages and administers the daily operations for the annual In-Service Training and Educational Incentive Pay Program which provides an \$800 supplement to career firefighters who complete at minimum 40 hours of in-service training at an accredited program.

### Testing and Activities in 2019

- Total exams administered: 10,425
  - Written exams administered: 6,673
  - Practical exams administered: 3,752
- Total number of test events: 622
  - Written exam events: 418
  - Practical exam events: 204
- Reciprocity granted: 822
- Fire departments audited: 23
- Fire departments participating in In-Service Training and Educational Incentive Pay Program: 103
- Fire service professionals receiving annual In-Service Training and Educational Incentive Pay: 6,403 (\$600 per qualified firefighter; totaling \$3,841,800.00)



### Administrative Services Section

The Administrative Services Section provides administrative support for the SFMO in the areas of budgeting, purchasing and personnel management. The Section ensures that qualified applications are properly processed under the State's laws and regulations for various professions and annually issues over 4,500 professional permits, licenses and certificates of registration.

The Permits and Licenses unit specifically processes regulatory permits, licenses and certificates of registration for the certified inspector program, explosives, fireworks, fire extinguisher, fire sprinkler and liquefied petroleum (LP) gas industries. Additionally, the unit processes complaints for related licenses and refers violations to its Legal Division for potential disciplinary action.

### Permits, Licenses, and Certification Programs in 2019

#### Portable and Fixed Fire Extinguisher Systems

Firms	146
Branches	8
Specialists	461
Technicians	42

### **Liquefied Petroleum (LP) Gas**

Dealers	586
Managers	11
Responsible Managing Employee	34

### **Fireworks**

Annual Retailers	106
Seasonal Retailers	886
Operators	219
Exhibitors	21
Display Permits Issued	484

### **Fire Protection Sprinkler Systems**

Contractors	208
Responsible Managing Employee	276

### **Certified Inspectors (Fire, Building, Mechanical, and Plumbing Inspectors)**

Inspectors	618
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### **Explosives**

Firm	50
Handlers	402
Blasters	137
Limited Blasters	1

### **Fire Safe Cigarettes**

Manufacturers	16
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## **SFMO/Division of Fire Prevention Operating Cost**

### **Entire Division of Fire Prevention**

#### **FY 2019**

	<b>Budget</b>	<b>Actual</b>
<b>Expenditures</b>	<b>\$25,280,000</b>	<b>\$25,007,368.12</b>
<b>Revenues</b>	<b>\$25,280,000</b>	<b>\$29,416,253.19</b>

Revenues collected include funding from the Fire Insurance Premium Tax, pursuant to Tenn. Code Ann. § 68-102-142, penalties, fees for services, or forfeitures collected under Tenn. Code Ann. §§ 68-102-101 through 68-102-143, 68-102-147, and 68-102-148.

Expenditures associated with the Fire Premium Tax are included in Tenn. Code Ann. §§ 56-4-208, 56-4-205(c), 56-22-114, 68-102-142 and 68-102-203.

### **Recommended Amendments**

There are no recommended amendments or suggested statutory changes as current law provides the SFMO/the Division of Fire Prevention the authority to carry out its mission of saving lives, reducing property loss and preventing injuries.



# Thank You!

The Tennessee State Fire Marshal's Office sincerely expresses its support for the men and women currently serving in the Tennessee fire service. We remain dedicated to protecting the safety of Tennesseans and their property.

**TN** Department of Commerce & Insurance | State Fire Marshal's Office

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